

PCT

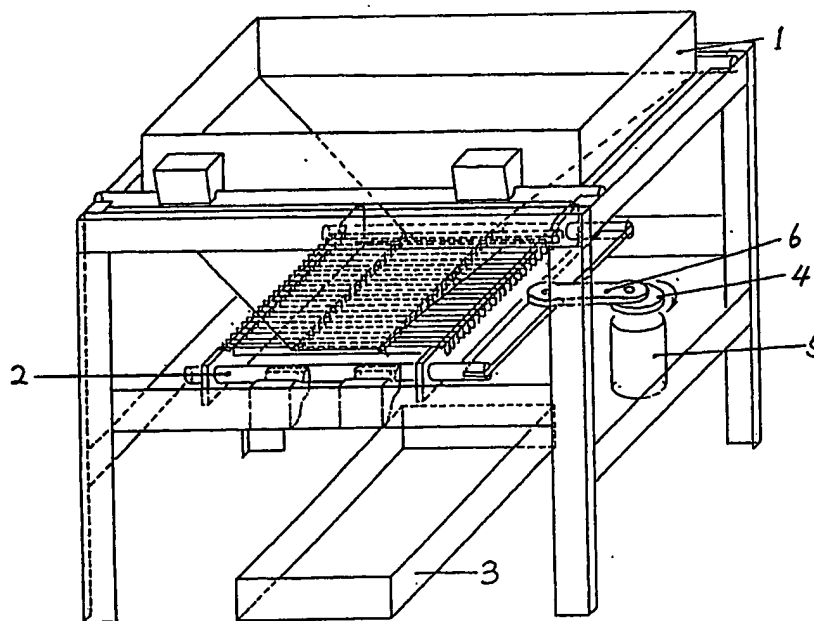
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(51) International Patent Classification <sup>5</sup> : <b>B26D 1/11, 1/06</b>	<b>A1</b>	(11) International Publication Number: <b>WO 93/20984</b> (43) International Publication Date: <b>28 October 1993 (28.10.93)</b>
<p>(21) International Application Number: <b>PCT/AU93/00118</b> (22) International Filing Date: <b>1 April 1993 (01.04.93)</b></p> <p>(30) Priority data: PL 1876 10 April 1992 (10.04.92) AU 16027/92 4 May 1992 (04.05.92) AU</p> <p>(71)(72) Applicant and Inventor: <b>ZHI, Hui, Lin [CN/AU]; P.O. Box 845, Ulverstone, TAS 7315 (AU).</b></p> <p>(81) Designated States: <b>CA, DE, GB, JP, KR, NZ, RU, US.</b></p> <p>Published <i>With international search report.</i></p>		

(54) Title: **MEAT SLICING APPARATUS**



(57) Abstract

An apparatus for cutting meat into multiple thin slices is disclosed. The meat is placed in a hopper (1) and gravity fed to a rack of saw toothed blades (2). The crank shaft (4) driven by the motor (5) results in the connecting rod (6) imparting a reciprocating motion to the rack (2), cutting the meat into thin slices which fall into the tray (3). It is particularly suitable for use in restaurants and sandwich bars.

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## MEAT SLICING APPARATUS

The Lin meat slicer has been designed to cut raw meat into a multiple number of thin slices simultaneously (the number of slices could be governed by the number of blades used).

An illustration of its assembly is shown in Fig. 1. Further detail of its component parts is shown in Fig. 2.

The Lin meat slicer operation as below.

In Figure 1, meat is placed in the stainless steel hopper (1) and then gravity fed onto a rack of blades (2). The crank shaft (4) and the connecting rod (6) driven by the motor (5) causes the rack and blades (2) to follow a reciprocating motion of 10mm per crank shaft revolution. The teeth in the hopper (1) base interlock with blades to prevent lateral motion of the meat during this process. The slices of meat then fall into the tray (3).

Further features are:

- i. Different thicknesses of slice may be obtained by matching a wider spacing blades.
- ii. The tray (3) may be hung up one side so that the slices of meat will slide into other larger containers.

The claims defining the invention are as follows:-

1. While there are many types of meat slicing devices currently available, the Lin meat slicer is unique because it has a rack of blades with a number of blades.
2. While there are many types of meat slicing devices currently available, the Lin meat slicer is unique because it has the capacity to slice the meat into a multiple number of thin filleted pieces completely in one.
3. The Lin meat slicer is primarily designed for restaurant and sandwich bar trade where if compact dimensions would fit into very small kitchens or work areas.
4. This invention device include any different size and shape of the Lin meat slicer as claims 1. and 2.

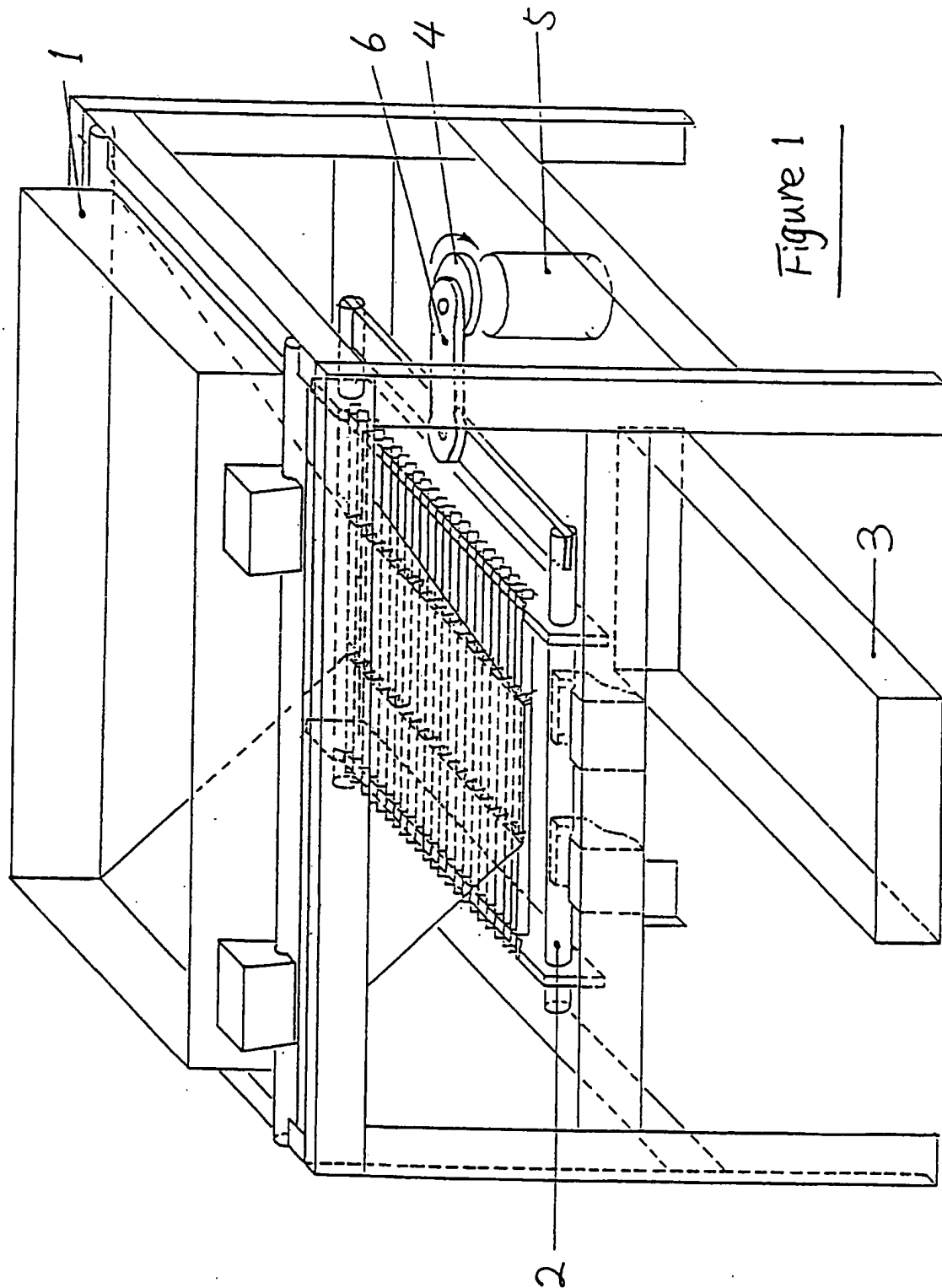


Figure 1

SUBSTITUTE SHEET

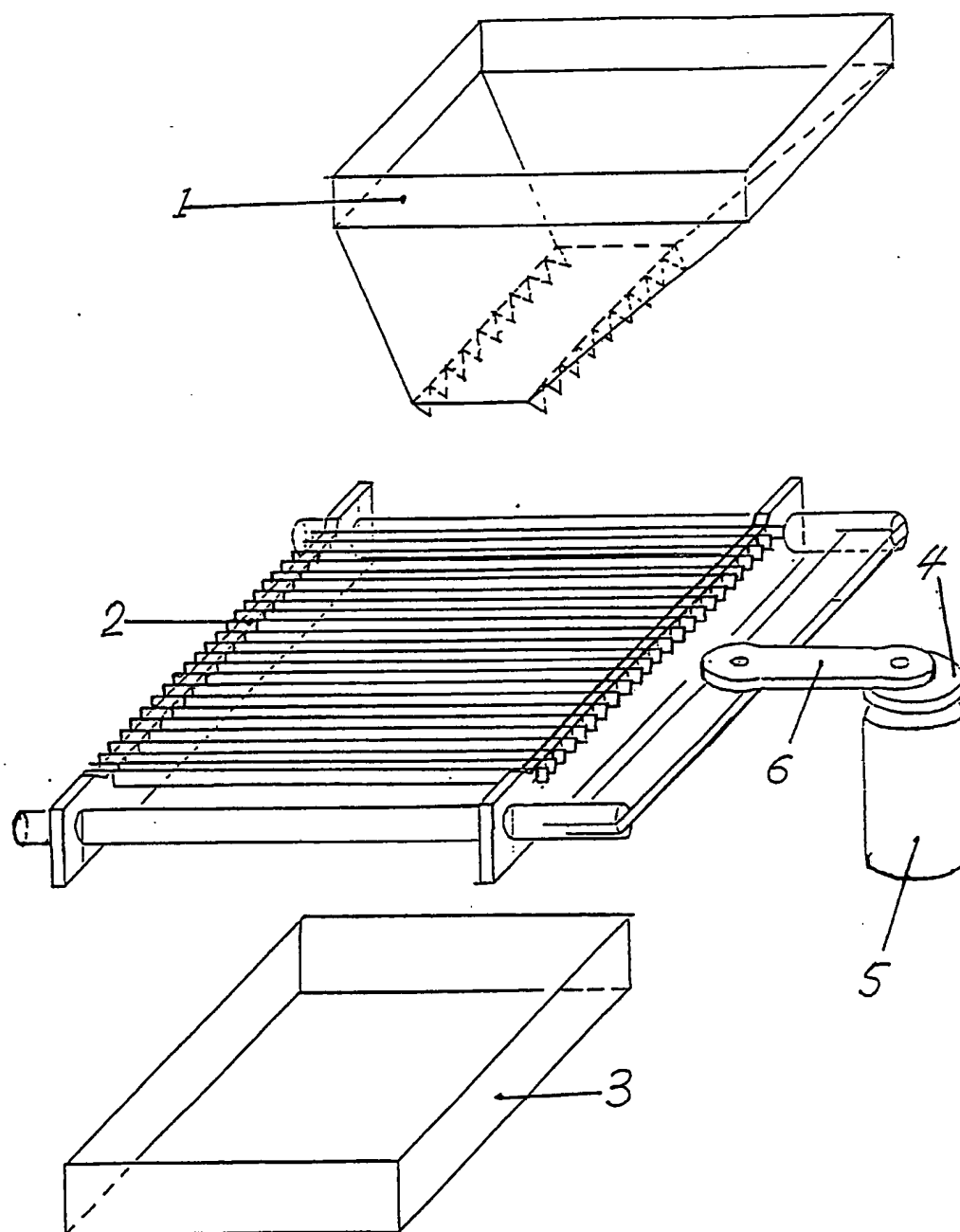
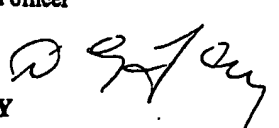


Figure 2

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU93/00118

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> Int. CL <sup>5</sup> B26D 1/11, 1/06  According to International Patent Classification (IPC) or to both national classification and IPC				
<b>B. FIELDS SEARCHED</b>  Minimum documentation searched (classification system followed by classification symbols) IPC B26D 1/11, 1/06  Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched AU : IPC as above  Electronic data base consulted during the international search (name of data base, and where practicable, search terms used)				
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>				
<b>Category*</b>	<b>Citation of document, with indication, where appropriate, of the relevant passages</b>	<b>Relevant to Claim No.</b>		
Y	AU,B, 14262/88 (608310) (FENDOKY) 20 October 1988 (20.10.88) Figure 1			
Y	US,A, 3245447 (JONES) 12 April 1966 (12.04.66) Figures 1-6			
Y	US,A, 3089526 (LYKKEBERG) 14 May 1963 (14.05.63) Entire document			
Y	US,A, 3028894 (LYKKEBERG) 10 April 1962 (19.04.62) Entire document			
<div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C.         </div> <div> <input checked="" type="checkbox"/> See patent family annex.         </div> </div>				
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>* Special categories of cited documents :</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> </td> <td style="width: 50%; vertical-align: top;"> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>"&amp;" document member of the same patent family</p> </td> </tr> </table>			<p>* Special categories of cited documents :</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p>	<p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>"&amp;" document member of the same patent family</p>
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Date of the actual completion of the international search 12 July 1993 (12.07.93)		Date of mailing of the international search report 19 JULY 1993 (19.07.93)		
Name and mailing address of the ISA/AU  AUSTRALIAN INDUSTRIAL PROPERTY ORGANISATION PO BOX 200 WODEN ACT 2606 AUSTRALIA  Facsimile No. 06 2853929		Authorized officer   D.G. FRY  Telephone No. (06) 2832130		

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU93/00118

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate of the relevant passages	Relevant to Claim No.
Y	FR,A, 753179 (STEFFEN et al) 9 October 1933 (09.10.33) Entire document	
Y	DE,A, 553876 (PINCUS) 16 June 1932 (16.06.32) Entire document	
A	GB,A, 1350651 (N.V. MAATSCHAPPIJ VOOR INDUSTRIELE RESEARCH ENONTWIKKELING) 18 April 1974 (18.04.74) Entire document	
A	AU,B, 68045/90 (625187) (APV BAKER PTY LTD) 3 October 1991 (03.10.91) Entire document	
A	AU,A, 43744/64 (ALLIED CHEMICAL CORPORATION) 28 October 1965 (28.10.65) Entire document	
A	AU,B, 1648/39 (110188) (ROSE BROTHERS) 4 April 1940 (04.04.40) Entire document	



<b>Box I</b>	
<b>Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)</b>	
This international search report has not established in respect of certain claims under Article 17(2)(a) for the following reasons:	
1.	<input type="checkbox"/> Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
2.	<input checked="" type="checkbox"/> Claim Nos.: 1-4 because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:  It is impossible to arrive at a reasonable conclusion as to the scope of the claimed invention. This report is therefore based on the operational statement at Page 1 line 8 - Page 2 line 2 with reference to figures 1-2.
3.	<input type="checkbox"/> Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).
<b>Box II</b>	
<b>Observations where unity of invention is lacking (Continuation of item 2 of first sheet)</b>	
This International Searching Authority found multiple inventions in this international application, as follows:	
1.	<input type="checkbox"/> As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims
2.	<input type="checkbox"/> As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3.	<input type="checkbox"/> As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4.	<input type="checkbox"/> No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
<b>Remark on Protest</b>	
<input type="checkbox"/>	The additional search fees were accompanied by the applicant's protest.
<input type="checkbox"/>	No protest accompanied the payment of additional search fees.

**INTERNATIONAL SEARCH REPORT**

Information on patent family memb.

International application No.

**PCT/AU93/00118**

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report				Patent Family Member			
AU	14262/88	EP WO	352278 8807818	GB	2228667	US	4913017
AU	68045/90	GB	2242117				
GB	1350651	CH	522780	DE	2116941	NL	7005284
END OF ANNEX							